Trying 01083...Open

PLEASE ENTER HOST PORT ID:
PLEASE ENTER HOST PORT ID:x
LOGINID:d270jkr
PASSWORD:
TERMINAL (ENTER 1, 2, 3, 4, OR ?):□3

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  * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
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  *        * PLEASE USE 305-9000 FOR NEW TELEPHONE NUMBER *             *
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  * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
  *                Help Desk --> 703-305-9000                           *
  *                                                                     *
  *     The Help Desk is staffed for APS support 7 days/week.           *
  *       Monday through Friday:      6:30am - 9:00pm                   *
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  *                                                                     *
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  *     related questions.                                              *
  * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
  *     >>>>>>>>>>>>> NEW SUNDAY HOURS !!! <<<<<<<<<<<<<                *
  *                                                                     *
  *     The APS is available:                                           *
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  * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
  *        U. S.  PATENT  TEXT  FILE                              *
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  *                                                               *
  *                                                               *
  * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

=> s building control and information system

        112024 BUILDING
       1138071 CONTROL
           142 BUILDING CONTROL
                 (BUILDING(W)CONTROL)
        411789 INFORMATION
       1193921 SYSTEM
          2476 INFORMATION SYSTEM
                 (INFORMATION(W)SYSTEM)
L1           1 BUILDING CONTROL AND INFORMATION SYSTEM

=> d 1 kwic


US PAT NO:     4,591,967 [IMAGE AVAILABLE]            L1: 1 of 1

DETDESC:

DETD(118)

 To . . . the AC256, you could buy a general-purpose computer system.
But few of these have the hardware or software required for building
control, and all of them bring too much complexity to the task. Plant
managers typically do not want to deal with. . .

DETDESC:

DETD(2364)
1=Print Information & System Monitoring Commands only,

=> d


1.  4,591,967, May 27, 1986, Distributed drum emulating programmable
controller system; Donald A. Mattes, et al., 364/132, 222.2, 222.3, 229,
229.1, 229.4, 230, 230.4, 236.1, 237.2, 237.5, 238.3, 238.4, 245.9, 248,
264, 264.1, 264.2, 265, 266, 270, 270.4, 271, 271.2, 273, 273.1, 273.2,
273.4, 284, 284.3, 284.4, 285, 286, 286.4, DIG.1; 710/110 [IMAGE
AVAILABLE]

=> s satellite module

         18959 SATELLITE
         90222 MODULE
L2          34 SATELLITE MODULE
                 (SATELLITE(W)MODULE)

=> s utility monitoring

        170751 UTILITY
        155305 MONITORING
L3          29 UTILITY MONITORING
                 (UTILITY(W)MONITORING)

=> s l2 and l3
```

```
L4            0 L2 AND L3

=> s satellite utility node

         18959 SATELLITE
        170751 UTILITY
         59393 NODE
L5           0 SATELLITE UTILITY NODE
                 (SATELLITE(W)UTILITY(W)NODE)

=> s wireless

L6       13346 WIRELESS

=> s building and monitor? and environmental or mechanical

        112024 BUILDING
        297718 MONITOR?
        113401 ENVIRONMENTAL
        515214 MECHANICAL
L7      516692 BUILDING AND MONITOR? AND ENVIRONMENTAL OR MECHANICAL

=> s l7 and l6

L8         2958 L7 AND L6

=> s l2 and l8

L9            0 L2 AND L8

=> s satellite and l8

         18959 SATELLITE
L10        291 SATELLITE AND L8

=> s 455/clas

L11      32864 455/CLAS

=> s l11 and l10

L12          78 L11 AND L10

=> d 1-5
```

1. 5,937,332, Aug. 10, 1999, **Satellite** telecommunications repeaters and retransmission methods; Peter D. Karabinis, **455/12.1, 11.1, 90** [IMAGE AVAILABLE]

2. 5,926,745, Jul. 20, 1999, Network operations center for mobile earth terminal **satellite** communications system; Michael E. Threadgill, et al., **455/12.1, 427, 428** [IMAGE AVAILABLE]

3. 5,917,405, Jun. 29, 1999, Control apparatus and methods for vehicles; Raymond Anthony Joao, 340/426; 307/10.2; 340/425.5, 825.32; 342/457; **455/404**; 701/36 [IMAGE AVAILABLE]

4. 5,913,164, Jun. 15, 1999, Conversion system used in billing system for mobile **satellite** system; Robert L. Pawa, et al., **455/427, 12.1, 406, 411** [IMAGE AVAILABLE]

5. 5,898,455, Apr. 27, 1999, Interface modules and methods for coupling combined communication signals to communication receivers; Nader A. Barakat, et al., 348/6, 8; **455/3.2, 6.3, 180.1, 190.1** [IMAGE AVAILABLE]

=> d 1 kwic

US PAT NO: 5,937,332 [IMAGE AVAILABLE] L12: 1 of 78
TITLE: **Satellite** telecommunications repeaters and retransmission methods
US-CL-CURRENT: **455/12.1, 11.1, 90**

ABSTRACT:
Satellite telecommunications repeaters are provided which receive, amplify, and locally retransmit the downlink signal received from a **satellite** thereby increasing the effective downlink margin in the vicinity of the **satellite** telecommunications repeaters and allowing an increase the penetration of uplink and downlink signals into buildings, foliage, transportation vehicles, and other. . .

SUMMARY:

BSUM(2)

The present invention relates to **satellite** telecommunications systems and methods, and in particular, to systems and methods which can improve the link margins between satellites and. . .

SUMMARY:

BSUM(4)

Satellite radiotelephone communications systems are used widely to provide dependable, high quality communications. See, for example, U.S. Pat. No. 5,303,286 to Robert A. Wiedeman, entitled **Wireless** Telephone/**Satellite** Roaming System.

SUMMARY:

BSUM(5)

FIG. 1 is a conceptual diagram of a **satellite** radiotelephone system. As shown in FIG. 1, a **satellite** radiotelephone system typically includes one or more satellites 110, which may serve as relays or transponders between at least one. . . radiotelephones 120. The earth station may in turn be connected to a public switched telephone network 140, allowing communications between **satellite** radiotelephones, and communications between **satellite** radiotelephones and conventional terrestrial cellular radiotelephones or landline telephones. The **satellite** radiotelephone system may utilize a single antenna beam covering the entire area served by the system, or, as shown in FIG. 1, the **satellite** may be designed such that it produces multiple beams 150, each serving distinct geographical coverage areas 160 in the system's. . . region. Thus, a cellular architecture similar to that used in conventional terrestrial cellular radiotelephone systems can be implemented in a **satellite**-based system. The **satellite** 110 typically communicates with a radiotelephone 120 over a bidirectional communications pathway, with radiotelephone communications signals being communicated from the **satellite** 110 to the radiotelephone 120 over a downlink (or forward link) 170, and from the radiotelephone 120 to the **satellite** 110 over an uplink (or reverse link) 180.

SUMMARY:

BSUM(6)

Satellite radiotelephone systems are increasingly being developed for areas where the small number of thinly scattered users and/or the rugged topography. . .

SUMMARY:

BSUM(7)

Satellite radiotelephone systems may also serve urban areas where large buildings and other man-made structures may contribute to the degradation of **satellite** telecommunications signals caused by any naturally occurring features. It is also expected that a radiotelephone user will desire to use the radiotelephone while in a building or while riding in an automobile or other vehicle. The structure, **mechanical** operation and electrical circuitry present in an automobile or any other vehicle, and the structure of a building, along with any electrical or **mechanical** systems found therein or nearby, may further weaken signals traveling between satellites and radiotelephones.

SUMMARY:

BSUM(8)

The relatively small link margins involved in the typical **satellite** telecommunications system may be further decreased by a host of other physical processes. Both the forward and return link signals. . .

SUMMARY:

BSUM(9)

Multipath . . . whenever there is more than one path for the transmitted energy to travel between transmitter and receiver. For example, a **satellite** communications downlink may have a direct path between the **satellite** and the mobile user plus a reflected path from the ground or from other structures. In general, the reflected path. . .

SUMMARY:

BSUM(10)

In order to provide robust, stable communications, a **satellite** telecommunications system should generally provide signals of adequate strength to penetrate both natural and man-made obstacles which are in the signal path between the **satellite** and the radiotelephone. Unfortunately, satellites such as those comprising the Mobile **Satellite** System (MSS) now being implemented in the United States by the American Mobile **Satellite** Corporation, are generally severely power limited so it may be difficult to offer forward link margins that compare favorably to. . . to the size limitations of hand-held radiotelephones and power consumption limitations (as a function of battery charge life). Unfortunately, typical **satellite** antennas planned for deployment by MSS satellites are also generally size limited and thus may not be able to compensate. . .

SUMMARY:

BSUM(11)

The . . . noise (AWGN) channel. Such link margins may necessitate an almost completely unobstructed line-of-site (LOS) path between the radiotelephone and the **satellite** with little link margin left over to compensate for shadowing and or blockage caused by terrain, trees, foliage, and buildings.

SUMMARY:

BSUM(13)

In light of the fo[redacted]ping, it is an object of the p[redacted]ent invention to provide **satellite** telecommunications systems, components, and methods which can increase the penetration of uplink and downlink signals into buildings, foliage, transportation vehicles,. . .

SUMMARY:

BSUM(14)

This and other objects are accomplished according to the present invention by providing **satellite** telecommunications repeaters that receive, amplify, and locally retransmit the downlink signal received from a **satellite** thereby increasing the effective downlink margin in the vicinity of the **satellite** telecommunications repeaters. Furthermore, **satellite** telecommunications repeaters according to the present invention receive uplink signals transmitted by radiotelephones in the vicinity of the repeaters, amplify,. . .

SUMMARY:

BSUM(15)

According to one aspect of the present invention, constant gain, non-processing **satellite** telecommunications repeaters serve both the forward and the return links to enable operation of hand-held radiotelephones within vehicles, buildings, airports,. . .

SUMMARY:

BSUM(16)

Non-portable, mounted **satellite** telecommunications repeaters may be used wherein the antennas which receive downlink signals and retransmit uplink signals are placed at a. . .

SUMMARY:

BSUM(17)

Satellite telecommunications repeaters according to the invention may also be contained in single, portable, hand-held housings. These portable repeaters may have. . . extensions used to support the repeater housing in an operating position. According to one embodiment of the present invention, the **satellite** telecommunications repeaters may employ one or more legs rotatably attached to the hand-held housing to support the repeater in an. . .

SUMMARY:

BSUM(18)

According to another aspect of the present invention, the antennas of the **satellite** telecommunications repeaters used for receiving downlink signals from satellites and for retransmitting uplink signals to satellites may be aligned to satellites using conventional methods such as **mechanical** tracking and beam steering to thereby further increase link margin.

SUMMARY:

BSUM(19)

According to another aspect of the present invention, the antennas of portable embodiments of the **satellite** telecommunications repeaters of the present invention may be physically aligned to transmitting

satellites by users by providing a circuit which. . .

SUMMARY:

BSUM(20)

According to another aspect of the present invention, a sleep circuit is provided for the **satellite** telecommunications repeaters which can place the repeater in sleep, or stand-by, mode whenever no uplink signals from radiotelephones are present. This may serve to reduce **satellite** receiver noise and, particularly important in hand-held embodiments relying on internal battery power, to reduce power consumption by the repeater.

SUMMARY:

BSUM(21)

According to another aspect of the present invention, a device is provided to hold the **satellite** telecommunications repeater in close proximity to a window thereby improving the ability of the repeater to increase link margins within. . .

SUMMARY:

BSUM(22)

With . . . lighter and smaller antennas having lower gain can be used on handheld radiotelephones and still maintain adequate link margin for **satellite** telecommunications. Additionally, as a result of having greater effective link margins, the radiotelephone equivalent isotropic radiated power (EIRP) level can on the average be reduced by an adaptive power control algorithm, as well as the **satellite** per-circuit EIRP. Less **satellite** per-circuit EIRP can provide higher system capacity assuming a **satellite** is power limited, as opposed to spectrally limited, while less phone EIRP can increase battery life for the hand-held unit.

DRAWING DESC:

DRWD(2)

FIG. 1 illustrates a conceptual **satellite** communications system according to the prior art.

DRAWING DESC:

DRWD(3)

FIG. 2 illustrates a **satellite** communications system incorporating repeaters of the present invention.

DETDESC:

DETD(3)

FIG. . . . system including repeaters according to the present invention. As shown in FIG. 2, a repeater 200 is added to the **satellite** telecommunications system to allow an increase in the ability of uplink signals 180 and downlink signals 170 to compensate for. . . . trees, foliage, and buildings thus effectively increasing the link margin between satellites 110 and hand-held radiotelephones 120. Before describing the **satellite** telecommunications repeaters of the present invention in detail, a description of the overall communications system will first be made so. . .

DETDESC:

DETD(4)

Referring . . . 170 from one or more satellites 110 is received by a first antenna assembly 210 which is part of the **satellite** telecommunications repeaters 200 of the present invention. Upon receiving the downlink signal 170, the **satellite** telecommunications repeater 200 amplifies the downlink signal 170 and retransmits the signal to at least one radiotelephone 120. It is. . . retransmitted downlink signals 175 may be received by any number of radiotelephones 120 within the effective signal radius of the **satellite** telecommunications repeaters 200. The **satellite** telecommunications repeaters 200 also receive uplink signals 180 transmitted by one or more radiotelephones 120. The **satellite** telecommunications repeaters 200 then amplify and retransmit the uplink signals to at least one orbiting **satellite** 110 which receives and processes the signal.

DETDESC:

DETD(5)

The **satellite** telecommunications repeaters 200 according to the present invention may be non-portable and mounted in a stand alone fixed structure or they may be attached to a building or some other structure. See FIG. 5A for example. Non-portable, mounted **satellite** telecommunications repeaters 200 may also be mounted in a transportation vehicle and thus be mobile. See FIG. 5B for example. Finally, the **satellite** telecommunications repeaters 200 may be completely portable allowing someone, such as a **satellite** radiotelephone user, to carry the repeater and place it so as to increase the link margin in a particular area.. . .

DETDESC:

DETD(6)

The **satellite** telecommunications repeaters 200 of the present invention do not perform signal processing. The **satellite** telecommunications repeaters 200 serve only to amplify and retransmit uplink and downlink signals received, thus functioning as non-processing repeaters to. . . and coverage. As a result, the repeaters 200 may be stand-alone units and are not required to be tied to **satellite** switching networks or to other elements of **satellite** cellular or conventional cellular telephone networks.

DETDESC:

DETD(10)

The **satellite** telecommunications repeaters 200 also receive uplink signals 180 from one or more radiotelephones 120 (illustrated in FIG. 2) by way. . .

DETDESC:

DETD(11)

As already described, the **satellite** telecommunications repeaters 200 of the present invention do not perform signal processing. The **satellite** telecommunications repeaters 200 serve only to amplify and retransmit uplink and downlink signals received, thus functioning as non-processing repeaters to. . . and coverage. As a result, the repeaters 200 may be stand-alone units and are not required to be tied to **satellite** switching networks or to other elements of **satellite** cellular or conventional cellular telephone networks. Although the

repeaters may include additional circuitry which detects or monitors the uplink signals. . .

DETDESC:

DETD(14)
The overall gain produced by the **satellite** telecommunications repeaters of either the uplink or the downlink signal should not exceed the corresponding antenna pair isolation because the. . .

DETDESC:

DETD(16)
For a **satellite** telecommunications repeater sufficiently small to be embodied in a hand-held unit, it is expected that a gain of 15 dB. . . will greatly depend on many factors including but not limited to the exact design specifications of the embodiment of the **satellite** telecommunications repeater, particularly the types of receiving and transmitting antennas employed and the relative location of the antennas. In any case, the **satellite** telecommunications repeater system is preferably limited to the case where:

DETDESC:

DETD(19)

Specific embodiments of the non-portable, mounted **satellite** telecommunications repeaters of the present invention are illustrated in FIGS. 5A and 5B. The non-portable, mounted embodiments of the **satellite** telecommunications repeaters of the present invention may allow operation of hand-held radiotelephones in structures where the link margins might not. . .

DETDESC:

DETD(20)

Referring to FIG. 5A, for example, **satellite** telecommunications repeaters can be mounted on buildings 550 to allow **satellite** telecommunications signals to penetrate such structures. The first antenna assembly 210 may be mounted on a window or on the. . .

DETDESC:

DETD(21)

Non-portable, mounted embodiments of the **satellite** telecommunications repeaters of the present invention could also be mounted in mobile transportation vehicles, such as automobiles, buses, trains, ships,. . .
<------User Break------>
u

DETDESC:
=>
=> s building control and monitor?

```
        112024 BUILDING
       1138071 CONTROL
           142 BUILDING CONTROL
                 (BUILDING(W)CONTROL)
        297718 MONITOR?
L13          84 BUILDING CONTROL AND MONITOR?

=> s 455/clas and l13
```

32864 455/CLAS
L14 2 455/[redacted]S AND L13

=> d 1-2

1. 5,263,181, Nov. 16, 1993, Remote transmitter for triggering a voice-operated radio; John D. Reed, **455/152.1, 92, 151.2, 352** [IMAGE AVAILABLE]

2. 4,468,656, Aug. 28, 1984, Emergency signalling unit and alarm system for rescuing endangered workers; Thomas J. Clifford, et al., 340/539, 294, 321, 573.1; **455/100** [IMAGE AVAILABLE]

=> d 2 kwci

'KWCI' IS NOT A VALID FORMAT FOR FILE 'USPAT'
ENTER DISPLAY FORMAT (CIT):kwic

US PAT NO: 4,468,656 [IMAGE AVAILABLE] L14: 2 of 2
US-CL-CURRENT: 340/539, 294, 321, 573.1; **455/100**

DETDESC:

DETD(19)

The . . . F.sub.a with one of four respective modulation states. The transmitter output is fed to antenna 89 for transmission to the **monitor** station.

DETDESC:

DETD(39)

In the operation of the emergency alarm system of the invention, while firemen are working in a burning **building**, **control** personnel **monitor** the control panel shown in FIG. 7. Upon hearing the audible alarm, they check which of the lamps is ignited. . .

=> s l13 and l2

L15 0 L13 AND L2

=> s l13 and satellite

18959 SATELLITE
L16 0 L13 AND SATELLITE

=> s l13 and wireless

13346 WIRELESS
L17 9 L13 AND WIRELESS

=> d 1-9

1. 5,909,429, Jun. 1, 1999, Method for installing a **wireless** network which transmits node addresses directly from a **wireless** installation device to the nodes without using the **wireless** network; Srinagesh Satyanarayana, et al., 370/254, 453, 475 [IMAGE AVAILABLE]

2. 5,737,318, Apr. 7, 1998, Method for initializing a **wireless**, packet-hopping network; George A. Melnik, 370/254; 709/222, 242 [IMAGE AVAILABLE]

3. 5,726,644, Mar. 10, 1998, Lighting control system with packet hopping communication; Thom[redacted]E. Jednacz, et al., 340/825.52[redacted]15/294; 340/825.06 [IMAGE AVAILABLE]

4. 5,671,387, Sep. 23, 1997, Method of automatically assigning device addresses to devices communicating over a common data bus; Russel J. Jacobs, et al., 711/210; 710/240, 242, 244 [IMAGE AVAILABLE]

5. 5,598,456, Jan. 28, 1997, Integrated telephone, intercom, security and control system for a multi-unit building; David H. Feinberg, 379/42, 43, 44, 47, 49 [IMAGE AVAILABLE]

6. 5,467,266, Nov. 14, 1995, Motor-operated window cover; Russel J. Jacobs, et al., 364/167.02; 160/1; 364/167.11, 188 [IMAGE AVAILABLE]

7. 5,241,380, Aug. 31, 1993, Track mounted surveillance system having multiple use conductors; Andrew L. Benson, et al., 348/143; 104/295; 348/82 [IMAGE AVAILABLE]

8. 5,132,681, Jul. 21, 1992, Intelligent switch system; Ryoichi Yabe, et al., 340/825.55; 702/127 [IMAGE AVAILABLE]

9. 4,567,557, Jan. 28, 1986, Building intelligence system; Martin J. Burns, 364/145; 340/310.01, 310.08, 538, 825.06; 364/138, 528.21 [IMAGE AVAILABLE]

=> d 5 kwic

US PAT NO: 5,598,456 [IMAGE AVAILABLE] L17: 5 of 9

ABSTRACT:
An . . . by at least one of the telephone lines. The control modules are further adapted to send information to a central **monitoring** station via the telephone lines indicative of the respective conditions and the central **monitoring** station is adapted to at least receive and store this information in its memory and output data indicative of the. . .

SUMMARY:

BSUM(2)

The present invention relates to a **building control** system and in particular to an integrated telephone, intercom, security and control system for a multi-unit building.

SUMMARY:

BSUM(5)

Similarly, . . . remote stations may be multi-zone office buildings, shopping centers, or any of various specialized applications. The central station provides point-to-point **monitoring** of each protection sensor device at each remote station. Protection sensors of any desired type are encompassed by the system,. . .

SUMMARY:

BSUM(7)

Finally, . . . bus); information outlets provided at the home bus which serve as connection nodes for appliances; and a plurality of room **monitor** controllers (hereinafter referred to as RMC) each having a built-in interface unit which has a control function element peculiar to. . .

SUMMARY:

BSUM(14)

A . . . of the telephone lines is adapted to receive the signals from the sensors and determine the respective conditions. A central **monitoring** station, including at least a memory device and an output device, is also connected to the switching means via at least one of the telephone lines. The control modules are adapted to send information to the central **monitoring** station, via the telephone lines, indicative of the conditions, and the central **monitoring** station is adapted to at least receive the information, store the information in its memory and output data indicative of. . .

SUMMARY:

BSUM(15)

The control modules are also adapted to selectively send information to the central **monitoring** station only upon determining a change in at least one of the conditions. Such a changed condition represents an alarm signal to the central **monitoring** station. Each control module is further adapted to accept commands from a user calling its unique telephone number via said. . .

SUMMARY:

BSUM(17)

The central **monitoring** station of the present invention preferably includes at least a central alarm station and a concierge station having a personal. . . to the personal computer. The personal computer is adapted to receive and store data transmitted thereto and output to said **monitor** and printer said alarm condition and said user programmed information.

SUMMARY:

BSUM(18)

Additional **monitoring** stations similar to the concierge station may also be included to receive information from control modules via the central alarm station. The central **monitoring** station and the additional **monitoring** stations may be arranged to control distinct areas of the building and also arranged to provide redundant control.

SUMMARY:

BSUM(19)

Preferably, . . . in common areas of the building and may be coupled to the means for transmitting non-broadcast television signals. The central **monitoring** station may further include means for selectively connecting the outputs of the closed circuit cameras to the means for transmitting non-broadcast television signals based on user information sent to the central **monitoring** station via the telephone lines. Outside cable company lines or other "pay per view" transmissions can also be coupled to the means for transmitting non-broadcast television signals and **monitored** and controlled by the central **monitoring** station.

DETDESC:

DETD(9)

Each . . . wire pair, one for each sensor, is currently the connector of choice due to its low cost and reliable operation. **Wireless** transmitters/receivers 53 employing existing X-10 technology, for example, can be employed. Additionally, it is also possible that a single addressable. . .

DETDESC:

DETD(12)

As . . . determine from the output signals respective conditions. Each control module 3 is further adapted to send information to a central **monitoring** station 18,19 (discussed below) via the telephone lines indicative of the determined conditions. Preferably, each control module 3 does not continuously send information to the central **monitoring** station 18,19, but only selectively sends information upon determining a change in at least one of the conditions.

DETDESC:

DETD(13)

It should be noted at this point that when the central **monitoring** station 18,19 receives information from the control module 3 indicating a changed condition, such a change represents an alarm condition to the central **monitoring** station 18,19.

DETDESC:

DETD(17)

Once . . . control module 3 will selectively send the information via the telephone lines, through the switch 1 and to the central **monitoring** station 18,19 also connected to the switch via at least one telephone line. The information sent to the central **monitoring** station 18,19 can include at least one bit of information for each sensor connected to the control module 3. The. . .

DETDESC:

DETD(18)

The central **monitoring** station 18,19 can take on numerous forms and need only include a memory device and an output device. The central **monitoring** station 18,19 is adapted to receive and store the information sent by the control modules 3 and output information indicative. . .

DETDESC:

DETD(19)

While a simple personal computer would be sufficient to serve as the central **monitoring** station 18,19, in the preferred embodiment of the present invention two distinct devices are employed; a central alarm station 18A. . . a digital telephone line employing a DCM 22. The concierge station 18A is typically a personal computer with an associated **monitor** 202 and printer 204 which receives and stores the information and sends an output including at least alarm conditions to the **monitor** and printer.

DETDESC:

DETD(20)

For . . . the information. regarding the smoke condition. Such

information is immediately forwarded to the concierge station 19 and displayed on the monitor 202 and/or the printer 204. Additionally, the control module can be programmed to also call the appropriate fire department in. . .

DETDESC:

DETD(21)

The central **monitoring** station 18,19 is further operable to display user programmed instructions stored in its memory. For example, a tenant of a particular unit can have programmed into the central **monitoring** station his choice of information to be displayed in the event that unauthorized personnel enter his apartment. Such information can. . .

DETDESC:

DETD(23)

As also noted above, each control module 3 does not instantaneously send information to the central **monitoring** station 18,19 regarding a changed condition. Rather, the sending of information by the control module 3 is performed selectively. While it is of course desirable to immediately send information regarding a smoke or fire condition to the central **monitoring** station 18,19, this is not equally desirable with all conditions. With a condition such as an open door condition, it is often desirable to delay output to the central **monitoring** station 18,19 for a predetermined period of time (e.g. 10 seconds) in order to afford an authorized user, e.g., the. . . the present invention provides for the selective output or sending of information by the control modules 3 to the central **monitoring** station 18,19.

DETDESC:

DETD(24)

The central **monitoring** station only receives information from the control modules when there is a change in condition. In order to detect if a control module is operating properly or is disabled, however, the central **monitoring** station of the present invention periodically polls each of the control modules to determine if the modules are still active. If they are not, the central **monitoring** station outputs a message to this effect. In addition, when battery operated sensors are used, the central **monitoring** station can poll the sensors via the control modules to determine if the battery charge is sufficient for normal operation,. . .

DETDESC:

DETD(26)

Advantageously . . . of data by the control modules 3 is controlled by user programmed information stored in the memory of the central **monitoring** station 18,19 and downloaded to a memory in the control module 3 at the direction of supervisory personnel. This information. . .

DETDESC:

DETD(27)

In a similar fashion, user identification numbers and passwords can be stored in the central **monitoring** station and downloaded to the individual control modules.

DETDESC:

DETD(30)

In . . . the apartment or office. Like the other sensors and detectors, this type of detector may be hardwired to or in **wireless** transmission with the control module 3 and is similarly controlled. In addition, the control module 3 can be programmed to. . .

DETDESC:

DETD(33)

As . . . there are a plurality of sensors connected to various control modules. Preferably, a group of these sensors are employed to **monitor** conditions in the common areas of the building and are connected to a control module 108 dedicated to that purpose. These sensors can be employed to **monitor** the opening and closing of doors to stairwells 14, laundry rooms, etc., and to **monitor** various other conditions in such common area. Additionally, the dedicated control module 108 can transmit signals, based on commands from the central **monitoring** station, for example, to an electrical door latch 15 connected to common area doors 14 that will open or close. . .

DETDESC:

DETD(34)

In addition to the central **monitoring** station 18,19, the system of the present invention preferably includes additional **monitoring** stations 23 and 30 each having a memory device and an output device and each connected the switch 1 via. . . is preferably located in a building manager's office and one in the office of a building engineer 30. These additional **monitoring** stations are generally arranged to receive data from the central alarm station 18 via a telephone line. An RS-232 line. . . instead be used for this purpose. Thus, only a single central alarm station 18A is employed for all of the **monitoring** stations.

DETDESC:

DETD(35)

Each of the **monitoring** stations is preferably arranged to receive data from control modules 3 located in different sections of the building. Thus, the additional **monitoring** station 23 in the building manager's office can be arranged to receive information from the control module 108 dedicated to the common areas, while the central **monitoring** station can receive information from control modules dedicated to apartments or offices. Alternatively, in a multi-story office building, one of. . . control stations are then adapted to process information from any of the control modules as necessary. In operation, the various **monitoring** stations poll each other or in some fashion communicate in order to provide for automatically allowing another station to pick. . .

DETDESC:

DETD(36)

The . . . DCM 17. As is known by those skilled in the art, a mechanical alarm panel-(MAP) is a device used to **monitor** a plurality of devices throughout the building. The MAP is generally connected to a plurality of analog devices and is. . .

DETDESC:

DETD(38)

Additionally, each unit of the building can include various meters 70 for **monitoring** utility use (gas, oil, water, electricity, steam, etc.) and each having an analog or digital output connected to a MAP.. . .

DETDESC:

DETD(39)

Preferably, . . . common areas of the building. The closed circuit cameras have outputs adapted to be coupled to the wiring. The central **monitoring** station includes means (such as a simple electronic switch) for selectively connecting outputs of the various closed circuit cameras to individual apartments in accord with instructions, sent to the central **monitoring** unit by a tenant, for example, via the telephone lines. Thus, if there are closed circuit cameras located in a laundry room, on the rooftop and in the physical fitness center of a building, a father wishing to **monitor** the status of his son washing clothing in the laundry simply calls the central **monitoring** station, enters an appropriate command and a **monitor** in his apartment (e.g., his usual television set) is switched to the output from the closed circuit camera in the laundry room. Just as easily, the father can call the central **monitoring** station and switch to the output from the rooftop closed circuit camera to **monitor** the status of his sunbathing daughter.

DETDESC:

DETD(40)

Furthermore, . . . cable company 56 can also be coupled to building wiring to provide cable TV reception for the tenants. The central **monitoring** station can also be used to **monitor** and control cable TV signals in a fashion identical to the closed circuit television control described above. Thus, selection of. . . sporting events and premium channels can all be effected by a user simply placing an intercom call to the central **monitoring** station.

CLAIMS:

CLMS(1)

I . . .
number and adapted to at least receive said signals generated by said sensors and determine said conditions from said signals;
a **monitoring** station, including a memory device and an output device, connected to said switching means by at least one of said telephone lines;
said at least one control module adapted to selectively send information indicative of said conditions to said **monitoring** station upon determining a change in at least one of said conditions in said each building unit or said common areas of the building via said telephone lines and said **monitoring** station adapted to receive and store said information in said memory and output data indicative of said conditions;
said at least. . . and,
said at least one control module adapted to be controlled by user programmed information stored in said memory of said **monitoring** station and downloaded to a memory in said at least one control module.

CLAIMS:

CLMS(2)

2. The system according to claim 1 wherein said **monitoring** station

periodically polls each of said at least one control module to determine if said module is still active and. . .

CLAIMS:

CLMS(10)

10. . . . information by said at least one control module is controlled by user programmed information stored in said memory of said **monitoring** station and downloaded to a memory of said **monitoring** station and downloaded to a memory in said at least one control module at the direction of supervisory personnel.

CLAIMS:

CLMS(11)

11. The system according to claim 9 wherein said **monitoring** station interprets information received from said at least one control module indicating a changed condition as an alarm condition.

CLAIMS:

CLMS(12)

12. The system according claim 11 wherein said **monitoring** station is further operable to display user programmed instructions stored in said memory of said **monitoring** station in response to said alarm condition.

CLAIMS:

CLMS(16)

16. The system according to claim 9 wherein each sensor is connected to said at least one control module by **wireless** transmitters and receivers.

CLAIMS:

CLMS(17)

17. The system according to claim 14 wherein the information sent to said **monitoring** station by said at least one control module includes industry standard device codes.

CLAIMS:

CLMS(20)

20. . . .
number and adapted to at least receive said signals generated by said sensors and determine said conditions from said signals;
a **monitoring** station, including a memory device and an output device, connected to said switching means by at least one of said telephone lines;
said at least one control module adapted to selectively send information indicative of said conditions to said **monitoring** station upon determining a change in at least one of said conditions in said each building unit or said common areas of the building via said telephone lines and said **monitoring** station adapted to receive and store said information in said memory and output data indicative of said conditions;
said at least. . . and,
said at least one control module adapted to be controlled by user programmed information stored in said memory of said **monitoring**

station and downloaded to a memory in said at least one control module.

CLAIMS:

CLMS(22)

22. The system according to claim 21 wherein said at least one control module sends information to said **monitoring** station by calling its unique telephone number.

CLAIMS:

CLMS(23)

23. . . . a call from a user in the event information indicative of a changed condition is to be sent to said **monitoring** station.

CLAIMS:

CLMS(24)

24. The system according to claim 21 wherein user identification codes are stored in said **monitoring** station and downloaded to a memory in said at least one control module at the direction of supervisory personnel.

CLAIMS:

CLMS(26)

26. . . . information by said at least one control module is controlled by user programmed information stored in said memory of said **monitoring** station and download to the memory in said at least one control module at the direction of supervisory personnel.

CLAIMS:

CLMS(27)

27. . . . a user must input a recognizable identification code to prevent said at least one control module from sending to said **monitoring** station information indicating the changed condition.

CLAIMS:

CLMS(30)

30. . . . user identification codes signifies an emergency condition and the control module transmits a signal of such condition silently to said **monitoring** station.

CLAIMS:

CLMS(37)

37. . . . further adapted to send information indicative of a change in activation/deactivation status of said at least one device to said **monitoring** station.

CLAIMS:

CLMS(42)

42. . . .
adapted to at least receive said signals generated by said sensors and determine said conditions from said signals;

at least one **monitoring** station, including a memory device and an output device, connected to said switching means by at least one of said. . . at least one control module adapted to selectively send information indicative of said conditions to at least one of said **monitoring** station upon determining a change in at least one of said conditions in said each building unit or said common areas of the building via said telephone lines and said at least one **monitoring** station adapted to receive and store said information in said memory and output data indicative of said conditions;

said at least. . . one control module adapted to be controlled by user programmed information stored in said memory of said at least one **monitoring** station and downloaded to a memory in said at least one control module;

said at least one **monitoring** station adapted to receive information from all of said control modules in said building;

said at least one **monitoring** station adapted to process information from said control modules which are arranged to receive said signals from said sensors under normal conditions of operation in different sections of said building;

each of said at least one **monitoring** station adapted to process information from any said control module in any section of said building in the event of emergency conditions in said building; and,

each of said at least one **monitoring** station adapted to poll each of the other said **monitoring** stations to confirm that each of the other said **monitoring** stations is functioning properly.

CLAIMS:

CLMS(46)

46. The system according to claim 42 wherein said at least one **monitoring** station includes at least a central alarm station and a concierge station having a personal computer and a printer, said. . .

CLAIMS:

CLMS(47)

47. . . . to claim 46 wherein said personal computer is adapted to receive and store data transmitted thereto and output to said **monitor** and printer alarm conditions and said user programmed information.

CLAIMS:

CLMS(48)

48. The system according to claim 46 wherein said at least one **monitoring** station is located in an office of appropriate building supervisory personnel.

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US PAT NO: 5,241,380 [IMAGE AVAILABLE] L17: 7 of 9

ABSTRACT:

A . . . the track provide power to a drive assembly mounted on the carriage. Video cameras are mounted to the carriage for **monitoring** selected regions adjacent to the path. Output signals from the cameras are transmitted on the conductors to a remote **monitoring** location. In the preferred embodiment, control signals for controlling placement of the carriage along the track are also transmitted on. . .

SUMMARY:

BSUM(2)

The . . . actuated carriage system, and more particularly, to a system having a track mounted, moveable carriage in which power, control and **monitored** information are transmitted along the same conductors, and which is useful as a surveillance system.

SUMMARY:

BSUM(3)

Remote cameras for viewing or **monitoring** objects are known and widely used in practice. The following patents provide examples of track mounted cameras that are used. . .

SUMMARY:

BSUM(4)

U.S. . . . by an elastic flap. The elastic flap is lifted up to allow a video camera located in the tube to **monitor** objects located outside the tube. The video camera is moved within the tube through a vacuum created in the tube,. . .

SUMMARY:

BSUM(5)

U.S. Pat. No. 4,656,509, issued to Matsuyama et al., shows a video camera and **wireless** communication equipment suspended from a rail. The communication equipment controls motion of the video camera on the rail and tilt. . .

SUMMARY:

BSUM(6)

U.S. . . . issued to Coutta et al., discloses a surveillance system supported on a longitudinal track. The system comprises a camera, a **wireless** transmitter and receiver, motors and a battery secured to a platform that is propelled with friction drive wheels along the. . . a sufficient charge on the battery. Control signals are transmitted to and video signals are received from the platform by **wireless** communication equipment at a remote location.

SUMMARY:

BSUM(7)

U.S. . . . is provided by a cable and pulley system. It is believed the camera control and video signals are transmitted with **wireless** communication equipment.

SUMMARY:

BSUM(8)

U.S. . . . isolated, contact wipers and bus bars to provide power and control signals to a moveable platform located on the rail. **Monitored** video and audio information is transmitted to a remote location on separate lines. A spring tensioned takeup reel is provided. . .

SUMMARY:

BSUM(11)

The . . . the t[redacted]k provide power to a drive ass[redacted]bly mounted on the carriage. Video cameras are mounted to the carriage for **monitoring** selected regions adjacent to the path. Output signals from the cameras are transmitted on the conductors to a remote **monitoring** location.

SUMMARY:

BSUM(14)

In . . . positioned at desired locations along the track. When used in conjunction with switches like panic buttons, placed periodically throughout the **monitored** area, or open door detectors, the sensors signify when the carriage 32 has reached the area of concern.

SUMMARY:

BSUM(15)

The . . . operations, such as for mounting a traveling hoist that is remotely operated. The video camera could be used as a **monitor** and the controls would include signals to raise and lower a hoist. Robot arms also could be a part of. . .

DETDESC:

DETD(2)

Referring . . . 14 of a particular floor 16 of a parking garage 17. Surveillance system 10 is used to observe the overall **monitored** area of parking floor 16 including parking spaces 18, entrance/exit doors 20, and other adjoining walls and motor vehicle entrance/exit. . .

DETDESC:

DETD(3)

In . . . 32, shown in FIG. 2, travels repetitively back and forth within track assembly 11 to provide video images of the **monitored** area to remote **monitors** 38.

DETDESC:

DETD(4)

FIG. . . . that cameras 34 and 36 mounted upon carriage 32 can look outward through cover 44, but people located within the **monitored** area would be unable to see carriage 32, thus preventing them from determining the carriage's position within the connected track. . .

DETDESC:

DETD(5)
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Carriage . . . mounted thereupon. Cameras 34 and 36 are mounted to platform 46 at different angles in order to observe completely the **monitored** area. As shown in FIG. 3, camera 34 is directed downward to observe those areas below track assembly while camera. . . remote
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US PAT NO: 4,567,557 [IMAGE AVAILABLE] L17: 9 of 9

SUMMARY:

BSUM(2)

The . . . control systems, and more particularly, is directed to a compact computer controlled system that is provided with the capability of **monitoring** and automatically controlling most electrical and mechanical functions that are normally installed in and about a home or other building.

SUMMARY:

BSUM(4)

It . . . air conditioners, smoke detectors, heat detectors, burglar alarms, and the like. Most of the installed systems are individually controlled and **monitored** and such systems have to be individually, manually adjusted by the building owner or occupants to meet existing or changing. . .

SUMMARY:

BSUM(5)

In . . . lighting systems, it is known to provide individual dimmer controls, to provide timed lighting sequences, to provide devices capable of **monitoring** energy consumption, and the like. With regard to typical burglar alarm systems and fire alarm systems, it is known to include stand-by batteries for function in the event of current failure, to provide continuous circuit **monitoring** to detect short circuits or open wires, and to include automatic transmitting devices to summon local fire and police departments. . .

SUMMARY:

BSUM(10)

Typically, . . . an input terminal strip for hard-wired inputs, an output terminal strip for relay outputs, a multi-channel carrier current interface with **wireless** carrier current modules of known design and suitable logical networks. While the building intelligence system is designed for stand-alone installation. . .

SUMMARY:

BSUM(11)

A . . . all of the logical control devices. Other commands are employed to function a power-line carrier transmitter for control of suitable **wireless** carrier current modules.

SUMMARY:

BSUM(14)

The building intelligence system further includes data **monitors** to **monitor** or log the total time in minutes that a reference input register is on or is at a logical "1".. . .

SUMMARY:

BSUM(19)

In the preferred embodiment, thirty-two separate on/off switching devices are provided for input signal sensing which may be **monitored**

by using the integr[redacted] wiring terminations in the int[redacted]ligence system. The input interface acc[redacted]s dry contact closure, open co[redacted]ector and. . . systems and fire alarm systems, thereby incorporating the ability to determine both short circuit and open circuit conditions in the **monitored** systems.

SUMMARY:

BSUM(25)

4. . . . to indicate the failure of an air conditioning system to thereby indicate the need for certain maintenance procedures; another may **monitor** low water level in a boiler, etc.

SUMMARY:

BSUM(26)
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